The Department Of Defense Explosives Safety Board

Explosives Safety Management Program Evaluation Process

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14. ABSTRACT
This paper describes, explains, and updates the status of the Department of Defense Explosives Safety Board's (DDESB's) Explosives Safety Management Program (ESMP) evaluation process. The DDESB Staff completed the first ESMP evaluation year in FY2009 and began their second evaluation year. As part of the evaluation process, the DDESB Staff collected lessons learned and comments from the field on the Staff's implementation of the process. Using this information, the Staff continuously assessed and improved the process. Additionally, DDESB Staff observed that many explosives safety personnel and their leadership do not fully understand the new methodology, which emphasizes identification of systemic problems and emerging issues for improving the Service's and DoD's ESMP. To increase understanding of the ESMP process, this paper presents and discusses DDESB Staff's improvements and evaluation process mythology.

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ABSTRACT

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Explosives Safety Management Program Evaluation Process

The United States Department of Defense (DoD) Explosives Safety Program originated as a formal program in the aftermath of World War I when several ammunition storage areas were destroyed in a series of mishaps. The most serious occurred at Lake Denmark Naval Ammunition Storage Depot, New Jersey, in July, 1926 when an electrical storm led to fires causing explosions and widespread destruction. The severe property damage and 19 fatalities led Congress to empower a board of Army and Naval officers to investigate the Lake Denmark disaster and determine if similar conditions existed at other ammunition depots.

The board reported in its findings that this mishap could recur, prompting Congress to establish a permanent board of officers to develop explosives safety standards and ensure compliance. This was accomplished when, in 1928, Congress passed 10 USC Section 172, Ammunition storage board.

> 10 USC Section 172. Ammunition storage board
>
> a. The Secretaries of the military departments, acting through a joint board selected by them composed of officers, civilian officers and employees of the Department of Defense, or both, shall keep informed on stored supplies of ammunition and components thereof for use of the Army, Navy, Air Force, and Marine Corps, with particular regard to keeping those supplies properly dispersed and stored and to preventing hazardous conditions from arising to endanger life and property inside or outside of storage reservations.
>
> b. The board shall confer with and advise the Secretaries of the military departments in carrying out the recommendations in House Document No. 199 of the Seventieth Congress (*10 USC 172 - Ammunition storage board*).

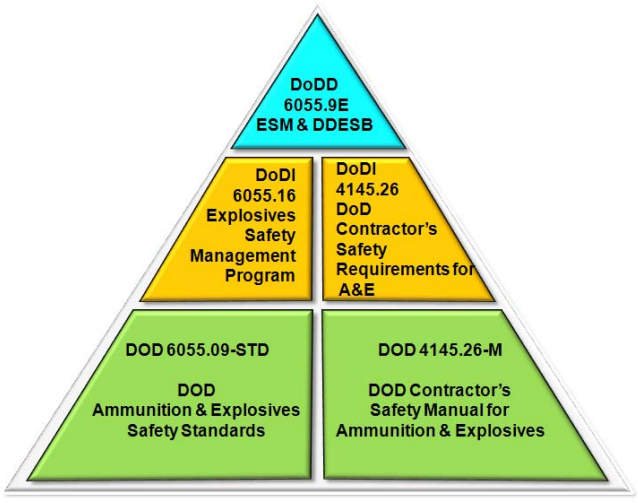


Figure 1: DDESB Publications

This organization evolved into the Department of Defense Explosives Safety Board (DDESB). Today, the DDESB authors Directive 6055.9E, *Explosives Safety Management and the DoD Explosives Safety Board* (Directive), DoD Instruction 6055.16, *Explosives Safety Management Program* (Instruction), DoD 4145.26, *DoD Contractor's Safety Requirements for A&E*, DoD 6055.9-STD, *Ammunition and Explosives Safety Standards* (Standard), and DoD 4145.26-M, *DoD Contractor's Safety Manual For Ammunition and Explosives* (Contractor Safety Manual) (see Figure 1). These publications fulfill half of their congressionally mandated mission of oversight and keeping military munitions properly dispersed.

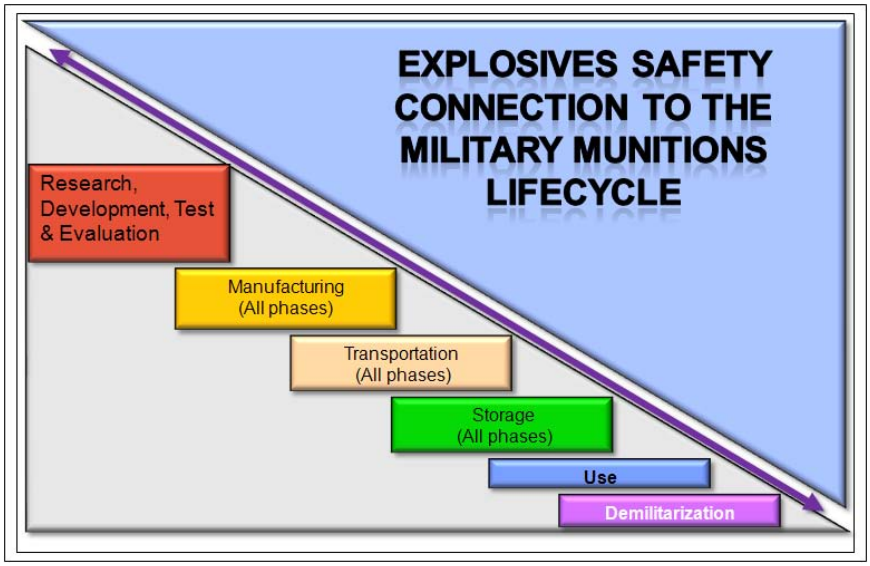


Figure 2: Munitions Life Cycle

DDESB executes the second part of the Congressional mandate through an evaluation program, which forms DDESB core component for keeping "informed on stored supplies of ammunition and components thereof for use of the Army, Navy, Air Force, and Marine Corps, with particular regard to keeping" military munitions properly stored and preventing hazardous conditions arising to endanger health, life, property and environment damage inside or outside of current and former DoD installations developing, manufacturing, transporting, storing, using, demilitarizing, and cleaning up military munitions (*10 USC 172 - Ammunition storage board*) (see Figure 2). In performing this core component, the DDESB's Staff oversees the DoD Explosives Safety Management Program (ESMP) to enhance force protection and asset preservation in a way that preserves the Department's vital warfighting capabilities. The Staff accomplishes this by:

a. Evaluating the overall effectiveness and program performance of the DoD Components' ESMP;
b. Identifying explosives safety management issues requiring DoD policy changes or increased emphasis;
c. Providing information to improve the DoD Components' ESMP;
d. Enabling the DDESB to be kept fully informed on ESMP-related issues;
e. Identifying ESMP-related concerns, issues for action, responsible entity, and lessons learned; and
f. Helping to continuously improve DoD's and each Component' ESMPs.

Evolution of Evaluation Process

Prior to FY 2008, DDESB surveyed DoD installations manufacturing, storing, maintaining, and using ammunition and explosives (A&E) on a rotating schedule. DDESB used these surveys to visit every installation and measure each installation's compliance with the Standard. Based on the DDESB's findings, DDESB required each installation having a noncompliance with the Standard to develop and forward a plan through their chain-of-command to correct noncompliance. In 1929, the then Department of War (Army) and Department of the Navy had only 36 installations. Today, DoD consists over 900 installations around the world. Over time, the scope of this effort has increased dramatically.

In 2003, the DoD Inspector General (DoDIG) recommended changes to how DDESB manages DoD's ESMP. During the DoDIG's review of DoD Explosives Safety Program Oversight, the DoDIG found program weaknesses relating to planning, oversight, and identified the need for DoD to restructure itself to become more effective in identifying and minimizing risks associated with explosives safety hazards. In response to the DoD Inspector General's Report, DDESB leadership developed a Strategic Plan for restructuring the DDESB and formulating an implementing DoD directive.

In optimizing the DoD Explosives Safety Process, DDESB's Strategic Plan and the Directive required the DDESB Board and Staff to develop a DoD Component explosives safety evaluation program in coordination with the DoD explosives safety stakeholders (Strategic Plan 3.4.2). Therefore, beginning in FY 08, DDESB moved from a standards-based installation-focused survey to a programmatic review of DoD Component's ESMPs (see figure 3). The review measures the effectiveness of the DoD Component's ability to support the warfighting mission while implementing explosives safety requirements consistently across their organization. By focusing on the Service's implementation of their ESMP and their associated business processes, DDESB can better assess how a DoD Component integrates explosives safety tasks into their mission execution.

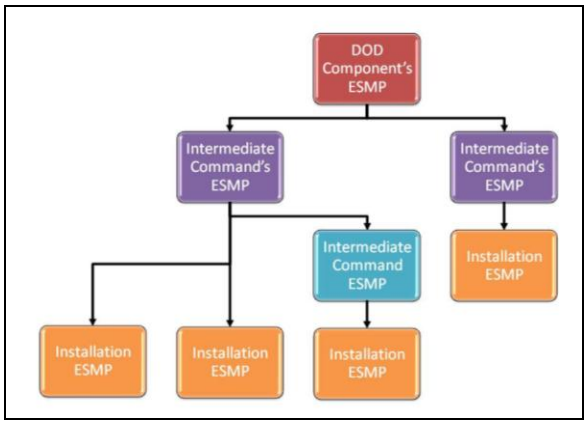


Figure 3: Multi-Level Evaluation Process

In the past, the DDESB Evaluation Team might only consist of two members and would be at an installation for only a day or even less. Now, the Team normally consists of 4 members and spends 3 to 5 days at an organization reviewing the ESMP's documentation and field implementation. This additional time allows the team to more accurately evaluate the effectiveness of the organization's implementation of their DoD Component's ESMP.

This new programmatic evaluation process provides several unique benefits. One such benefit relates to the DDESB Staff not only evaluating the installations' implementation of their DoD Component's ESMP, but the Staff, also, assessing the implementation of the DoD Component's ESMP from the top-down to determine consistency across the DoD Component's command.

The programmatic evaluation provides two other additional unique benefits. First, the DDESB Staff continually examines DoD Component ESMP to determine where current DoD explosives safety policy needs revision or new DoD explosives safety policy needs improvement. Additionally, the DDESB Staff constantly assesses their evaluation process looking for ways to make the process more valuable to DoD and the DoD Components. To aid in this improvement process, the DDESB actively seeks comments from the DoD Component's personnel involved with the evaluation as well as the opinions of installation personnel.

The focus of this programmatic evaluation process views noncompliance as symptoms indicating challenges to, or a weakness in, the installation's or middle-level command's management of their ESMP. When the same noncompliance issues are observed at multiple locations, DDESB believes the recurrences indicate challenges to or weaknesses in the Service's ability to implement an effective ESMP consistently across the Service. Therefore, DDESB expects the DoD Component to develop and submit a plan on how the DoD Component will surmount their challenges or weakness through improved management of their ESMP.

The DDESB Staff no longer requires or desires correction plans from individual organizations. Nor does, the DDESB Staff desire the DoD Component provide a corrective plan addressing individual organizations. Rather, DDESB wants a corrective plan addressing what each DoD Component will do to establish, implement, and maintain their ESMP consistently across their command.

The DDESB Staff considers the observations collected at all levels to be sample data points. After every evaluation, the DDESB Evaluation Team provides a briefing to all the DDESB Staff, discussing each of the collected data points. These briefing have been very valuable to the DDESB Staff for two main reasons. First, the evaluating Staff points out possible specific management areas needing evaluation at future locations. Secondly, the briefings have often led to refinements in the evaluation process based on the Staff's comments and those of the activity being evaluated.

Since the sample size is small, these data points lack any statistical merit. Nevertheless, the DDESB Staff tries to evaluate at least three installations with similar missions. If DDESB Staff observes the same challenges and weaknesses at two of the three, the DDESB Staff considers

them to represent possible challenges and weaknesses in the DoD Component's ability to implement a consistent ESMP across the Service.

Figure 4a: Indentifies Strengths

In addition to looking for weaknesses and challenges, the DDESB Staff looks for strengths during the process (see figure 4a). The DDESB Staff includes these observations in the summary report, which is written upon completion of the evaluations. This list of strengths is not all inclusive of a DoD Component's strengths, but, rather lists those strengths DDESB observed being implemented.

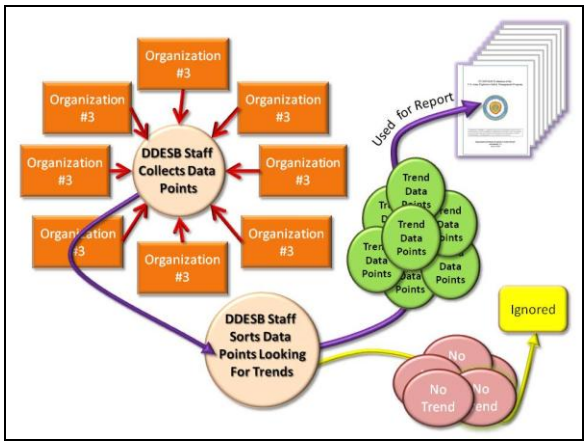


Figure 4b: Use of Collected Data Points

At the end of the evaluation period, the DDESB Staff sits down, reviews, analyzes, discusses, and decides which data points may represent possible trends denoting inconsistencies in the DoD Component's ESMP, eliminating those that do not. The Staff summaries these identified trends then the Staff develops and recommends corrective actions. The Staff provides these trend summaries and recommendations to the DoD Component in a report (see Figure 4b). The

DDESB Staff does not judge the severity of the identified weaknesses or challenges and does not include any such rating in the summary report.

During the development year, the DDESB Staff recognized that each evaluation year should be dedicated to a single DoD Component. Therefore, DDESB focuses on one DoD Component during each FY. This process provides DDESB with a more relevant overview of the DoD Component's ESMP, since all the data points collected can be more easily correlated. Secondly, these cycles of evaluations, allows the DoD Component to implement management improvements prior to their next survey cycle, and for seeking monies where necessary to implement the corrective actions.

Evaluation Tools

During FY 2008, the DDESB Staff began developing various tools to use in evaluating a DoD Component's ESMP at the installation level. The Staff continually refined these tools and developed additional tools to complement those tools used at the installation level.

The DDESB Staff developed and uses three different matrices depicting the program areas, elements and sub-elements that the Staff uses at the installation level (see Figure 5), intermediate headquarters level (see Figure 6), and at the Service headquarters level (see Figure 7).

Management	Plans, Policies, Procedures	Execution, Operations	Execution, Operations Support
1.1 Organization & Staffing	2.1 Site Planning	3.1 Facilities Conformance	4.1 Emergency Response
1.2 Tenants	2.2 Master Planning	3.2 Ranges	4.2 Inspections, Evaluations, Audits, Surveillance
1.3 Contractors	2.3 Accident Prevention Program	3.3 Demilitarization and Destruction	4.3 Facility Maintenance
1.4 Risk Stewardship	2.4 Explosives Safety Issuances	3.4 Records Management	4.4 Training

Figure 5: Installation Level Matrix

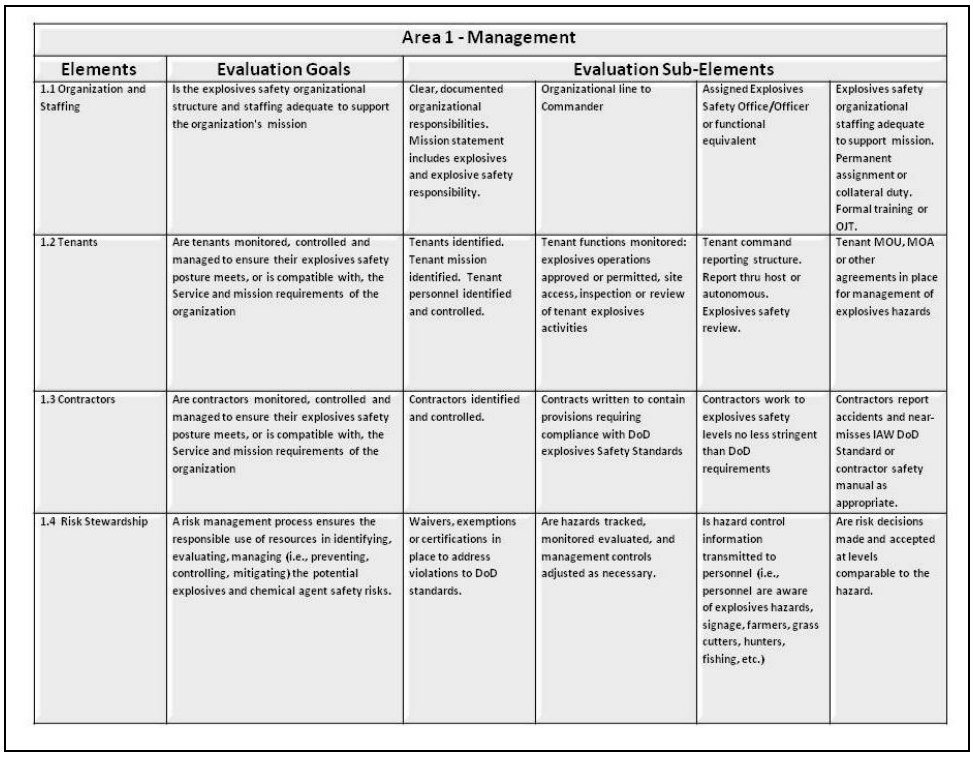
Intermediate HQ Program Evaluation Areas		
Management	**Execution**	**Specialized Areas**
1.1 Organization and Staffing	2.1 Inspections, Evaluations, Audits, or Surveillance	3.1 Host Nation, Shared Base, and Multi-National
1.2 Resource Allocation	2.2 Mishap Prevention	3.2 Joint Basing and Tenants
1.3 Issuances	2.3 Training	3.3 Munitions Response
1.4 Risk Stewardship	2.4 Site Planning	3.4 Hazard Classification
1.5 Planning		3.5 Contracts

Figure 6: Intermediate Headquarters Level Matrix

Service Headquarters Program Evaluation Areas		
DoD Directive 6055.9	**DoD Instruction 6055.16**	**DoD Standard 6055.09**
1.1 General Tenets	2.1 Decision Making Elements	3.1 Management
1.2 Program Management	2.2 Implementation, Resourcing and RDT&E	3.2 Plans, Policies, Procedures
1.3 Munitions Response	2.3 Board Level Items	3.3 Execution, Operations
1.4 R&D Investments	2.4 Other Responsibilities	3.4 Execution and Operations Support
1.5 Risk Stewardship		

Figure 7: Service Headquarters Level Matrix

Each top level matrix is divided into 3 or 4 program areas depending on the activity being evaluated (i.e., management, execution, DoD Directive, etc.). Each program area is further described by four or five program elements (i.e., numbered 1.1, l.2, etc.). Lastly, each of the program elements is associated with a goal and sub-elements describing how that goal is achieved. For comparison, Figure 7a illustrates a typical program area matrix associated with an installation level management review while Figure 7b illustrates the corresponding program area management matrix associated with an intermediate headquarters level review.



Area 1 - Management					
Elements	**Evaluation Goals**	**Evaluation Sub-Elements**			
1.1 Organization and Staffing	Is the explosives safety organizational structure and staffing adequate to support the organization's mission	Clear, documented organizational responsibilities. Mission statement includes explosives and explosive safety responsibility.	Organizational line to Commander	Assigned Explosives Safety Office/Officer or functional equivalent	Explosives safety organizational staffing adequate to support mission. Permanent assignment or collateral duty. Formal training or OJT.
1.2 Tenants	Are tenants monitored, controlled and managed to ensure their explosives safety posture meets, or is compatible with, the Service and mission requirements of the organization	Tenants identified. Tenant mission identified. Tenant personnel identified and controlled.	Tenant functions monitored: explosives operations approved or permitted, site access, inspection or review of tenant explosives activities	Tenant command reporting structure. Report thru host or autonomous. Explosives safety review.	Tenant MOU, MOA or other agreements in place for management of explosives hazards
1.3 Contractors	Are contractors monitored, controlled and managed to ensure their explosives safety posture meets, or is compatible with, the Service and mission requirements of the organization	Contractors identified and controlled.	Contracts written to contain provisions requiring compliance with DoD explosives Safety Standards	Contractors work to explosives safety levels no less stringent than DoD requirements	Contractors report accidents and near-misses IAW DoD Standard or contractor safety manual as appropriate.
1.4 Risk Stewardship	A risk management process ensures the responsible use of resources in identifying, evaluating, managing (i.e., preventing, controlling, mitigating) the potential explosives and chemical agent safety risks.	Waivers, exemptions or certifications in place to address violations to DoD standards.	Are hazards tracked, monitored evaluated, and management controls adjusted as necessary.	Is hazard control information transmitted to personnel (i.e., personnel are aware of explosives hazards, signage, farmers, grass cutters, hunters, fishing, etc.)	Are risk decisions made and accepted at levels comparable to the hazard.

Figure 7a: Installation Level Program Area Matrix

Area 1 – Management
1.1 Organization and Staffing: Explosives safety structure and staffing adequately supports the organization's missions.
Clear, documented organizational responsibilities that include explosives safety. Mission statement includes safety.
Organizational line to commander ensures effective communication of explosives safety issues.
Staffing levels are sufficient to assist subordinate organizations.
Assigned explosives safety responsibility. Effective routine two-way communications via organizational lines of authority.
1.2 Resource Allocation: Explosives safety related requirements are identified, budgeted, and resourced to effectively execute the organization's ESMP.
The budget has sufficient resources to support the ESMP.
There is a process in place between command levels to identify resource requirements and shortfalls.
There is a prioritization process in place that considers safety and risk.
The Safety Office is aware of resources necessary for corrective actions.
1.3 Issuances: Explosives safety policies, regulations, instructions, etc, are developed, updated, maintained, and enforced IAW DoD, Service, and HQ requirements.
Appropriate and effective explosives safety policies and guidance are issued to subordinate organizations.
There is a process in place to update issuances to comply with DoD requirements.
There is a process to review subordinate organizations' explosives safety issuances.
Input is actively solicited from subordinate organizations to prepare explosives safety issuances.
1.4 Risk Stewardship: Explosives safety risk acceptance and management processes effectively indentify, evaluate, and manage explosives safety risks.
Responsibilities and authorities are consistent with DoD and DoD Component's risk management requirements.
There is a process that ensures documented informed decisions (e.g. ORM, SOP, etc) are made by appropriate authorities.
There is a documented process to prepare, review and approve deviations.
Deviations are tracked and periodically reviewed for completeness and applicability.
1.5 Planning: Explosives safety tenets and requirements are integrated into strategic, contingency, and short-term planning.
Explosives safety goals and objectives are measurable, tracked, and reassessed as needed.
Explosives safety is integrated into planning and communicated to subordinate organizations.
Explosives safety is integrated into emergency response planning.
Explosives safety is integrated into the BRAC decision package.

Figure 7b: Intermediate Headquarters Level Program Area Matrix

These matrices are not checklists per se since the Staff is looking for systemic program weaknesses and challenges causing ineffectiveness, not solely compliance issues. This shift from strict compliance to effectiveness and compliance cannot be over emphasized. Installations, intermediate commands, or Service headquarters level commands should not go through the matrix checking off the boxes believing that because those elements exist in their program they have met the DDESB's goal.

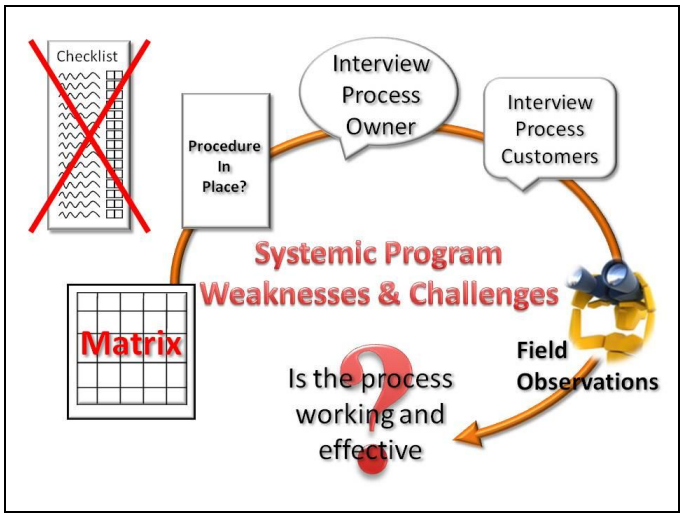


Figure 8: Evaluation Goal

The DDESB staff goes beyond looking at whether an organization has processes in place. The Staff looks at how the process is working by interviewing various personnel involved in the process – another tool the Staff developed and uses. For instance, if the installation has a work order program, the Staff will look at the process, talk to the individual who owns and manages the program, look at work orders, and talk with customers who submit the work orders (see Figure 8). Using all these factors, the Staff determines if the program is effective and compliant.

Additionally, the DDESB Staff conducts field observations to assess how the various processes are implemented and conducted at the lowest level of the DoD Component. For instances, prior to arriving at the site, the Staff will review required explosives safety submissions (RESS), compare the approved RESS with the installation's RESSs then assesses their implementation in the field. Additionally, the Staff visits various storage locations to judge the ability of field personnel to implement DDESB and the DoD Component's storage, compatibility, and housekeeping requirements. While in the field, the Staff observes the state of the lightning protection systems (LPS), then compares the field results with inspection records for the LPS and interviews personnel responsible for maintaining the systems.

Notification and Briefings

Prior to visiting an organization, the DDESB Team Leader sends them a memorandum, often through their DoD Component's Safety Center or headquarters organization. The memo provides a list of the DDESB Teams members, support requirement, documentation wanted before hand and at the activity, activities to visit, and personnel to interview.

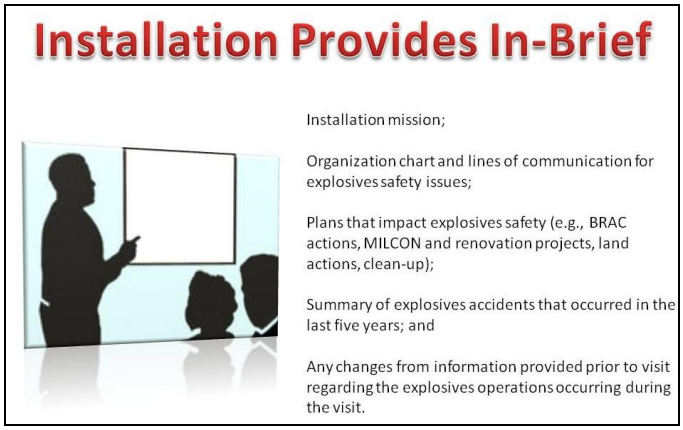


Figure 9: Installation In-Brief

Another new feature of the process involves the organization being evaluated providing an in-briefing to the DDESB Evaluation Team (see Figure 9). This evaluation should address the organization's mission, goals, and chain-of-command, emphasizing the explosives safety function. The in-briefing should speak to tenants with explosives safety missions and their relationship with the organization's explosives safety program. The in-briefing should discuss the installation's past explosives safety accidents, deviations, future construction, and other pertinent explosives safety information. An electronic copy of the briefing will be provided to the Evaluation Team.

As in years past, DDESB provides an in-brief and an out-brief to the Command group. However, unlike past years, no report is provided to the installation nor does DDESB require the installation to develop and summit a corrective action plan. However, both the Army and the Air Force safety organizations have requested copies of the team's observations.

Year of the Army

During FY 2009, the Army volunteered to be the first DoD Component to be evaluated. During the year, DDESB evaluated the effectiveness of the Army's ability to implement a consistent ESMP by visiting selected Army commands and installations, Figure 10. In addition to the information collected during visits, the DDESB staff consider other data, such as accident statistics, and the Service's interaction and responsiveness with and to DDESB.

Organization	Date
Office of the Director of Army Safety and Army Headquarters	13 January 2009
U.S. Army Technical Center for Explosives Safety (USATCES)	26 January 2009
HQ, U.S. Army Corp of Engineers	4 March 2009
HQ, Installations Management Command	20 May 2009
HQ, Army Materiel Command	27 May 2009
HQ, Army Test and Evaluation Command	5 June 2009
Pinecastle Jeep Range (Formerly Used Defense Site (FUDS))	1-3 April 2009
Fort Campbell	8-12 June 2009
White Sands Missile Range	22-26 June 2009
Holston Army Ammunition Plant	27-31 July 2009
Anniston Chemical Activity and Chemical Demilitarization Facility	27-31 July 2009
Ft. Drum	17-21 August 2009
Aberdeen Proving Ground (Army Research Laboratory, Garrison)	14-17 September 2009
Army Garrison Livorno	17-22 September 2009
Army Garrison Grafenwoehr	24-28 September 2009

Figure 10: Army Commands and Installations Involved in 2009 Evaluation

During this evaluation year, the DDESB Staff and Leadership gained insight from their observations and from those of the Army personnel allowing the Staff to improve the process. This insight lead to many improvements and lessons-learned.

The DDESB Staff realized that the most effective way for them to gain a cross-sectional view of a DoD Component was to nominate those installations they wanted to visit as sampling locations to the DoD Component. Then, allow the DoD Component to propose the primary and secondary dates for the evaluation in coordination with the location, as well as suggest alternative locations to the DDESB for negotiation.

Another lesson learned involved the number of Army activities to visit. During FY 2009, the DDESB Staff visited 8 installations to gather sample data points. Given the complexity and diversity of the Army's mission and number of locations, the DDESB Staff realized the number should be greatly expanded. Further, given the small number of Marine Corps locations, DDESB Staff decided that six months was all the Staff needed to evaluate the Marines Corp implementation of their ESMP. Therefore, the DDESB Staff would conduct the Marine Corp evaluation during the first six months of the FY and then the Staff would evaluate the Army over the next six months plus the entire next FY.

The DDESB Staff recognized a need to communicate the results of their evaluations during their out-brief at the installations. Since the Staff does not leave a report, the out-brief is the Staff's only opportunity to convey their results to the organization's staff. Further, since the purpose of the evaluation involves the collection of data points for the evaluating the effectiveness of the DoD Component's implementation of a consistent ESMP across the Service, the DDESB Staff wanted to emphasize this focus. Therefore, the DDESB staff adopted a three-color rating system – green, yellow, and red – for indicating the state of the ESMP matrix element. DDESB Staff does not apply the three-color rating system above the installation level.

a. Green: Indicates an organization has implemented the program element and associated processes in their ESMP. Minor issues may exist but none that affect the overall performance of the ESMP element.

b. Yellow: Indicates local problems or process weaknesses exist. These local weaknesses usually affect a small group of people or an individual but do not present a pattern. The problems can usually be traced back to a particular person's decision, demeanor, or statements. Local problems are best fixed at the level of the organization that the problem affects.

c. RED: Indicates one of two possible conditions – systemic program weaknesses, such as lack of a process, or a recognized *Imminently Dangerous condition* to workers or the public.

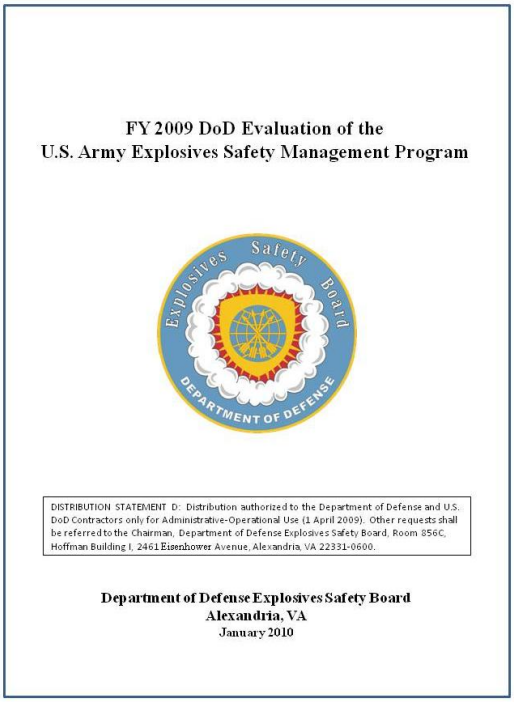
The DDESB Staff noted during the evaluation cycle that more often than not the organization being evaluated did not understand the focus of the new DDESB process. The organizations still perceived the evaluations as compliance surveys. While the DDESB Staff has a responsibility to identify and point out noncompliances found at installations, the focus of the evaluation remains the DoD Component's ability to implement their ESMP consistency across their command. The DDESB Staff views these discoveries of non-compliant as teaching opportunities rather than findings of fault. Further, to encourage installations' openness, no report is left with the installation as stated previously. Nevertheless, both the Army and Air Force have asked DDESB Staff to provide a listing of the observations found at each activity. How those listing are used is up to the DoD Component.

Area 1 – Management	
1.1 Organization and Staffing: Explosives safety structure and staffing adequately supports the organization's missions.	
	Clear, documented organizational responsibilities that include explosives safety. Mission statement includes safety.
	Organizational line to commander ensures effective communication of explosives safety issues.
	Staffing levels are sufficient to assist subordinate organizations.
	Assigned explosives safety responsibility. Effective routine two-way communications via organizational lines of authority.
1.2 Resource Allocation: Explosives safety related requirements are identified, budgeted, and resourced to effectively execute the organization's ESMP.	
	The budget has sufficient resources to support the ESMP.
	There is a process in place between command levels to identify resource requirements and shortfalls.
	There is a prioritization process in place that considers safety and risk.
	The Safety Office is aware of resources necessary for corrective actions.
1.3 Issuances: Explosives safety policies, regulations, instructions, etc, are developed, updated, maintained, and enforced IAW DoD, Service, and HQ requirements.	
	Appropriate and effective explosives safety policies and guidance are issued to subordinate organizations.
	There is a process in place to update issuances to comply with DoD requirements.
	There is a process to review subordinate organizations' explosives safety issuances.
	Input is actively solicited from subordinate organizations to prepare explosives safety issuances.
1.4 Risk Stewardship: Explosives safety risk acceptance and management processes effectively indentify, evaluate, and manage explosives safety risks.	
	Responsibilities and authorities are consistent with DoD and DoD Component's risk management requirements.
	There is a process that ensures documented informed decisions (e.g. ORM, SOP, etc) are made by appropriate authorities.
	There is a documented process to prepare, review and approve deviations.
	Deviations are tracked and periodically reviewed for completeness and applicability.
1.5 Planning: Explosives safety tenets and requirements are integrated into strategic, contingency, and short-term planning.	
	Explosives safety goals and objectives are measurable, tracked, and reassessed as needed.
	Explosives safety is integrated into planning and communicated to subordinate organizations.
	Explosives safety is integrated into emergency response planning.
	Explosives safety is integrated into the BRAC decision package.

Figure 11: Intermediate-Level Matrix

During the development of the evaluation process in FY 2008, the DDESB Staff's main effort involved developing the criteria used at the installation level. The DDESB Staff spend some time, as well, developing criteria for the DoD Component's headquarters element. During the Army evaluation, the DDESB Staff realized that neither criteria could be used to evaluate intermediate commands. As a result, the DDESB Staff developed the intermediate criteria shown in Figure 11, and is evaluating its effectiveness this year with the Air Force.

At the conclusion of the Army evaluation, the DDESB Staff developed a process to review all the data points collected, determined which represented possible weaknesses and challenges to the Army's ESMP, and then presented them to the Army in a report (see Figure 12). To begin the process, the DDESB Staff set aside one week to review and discuss the data points. During this process, many of the data points were determined as not indicating trends and were not used. At the end of this period, the Staff had identified possible issues with the Army's ESMP.



FY 2009 DoD Evaluation of the
U.S. Army Explosives Safety Management Program

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Department of Defense Explosives Safety Board
Alexandria, VA
January 2010

Figure 12: DoD Evaluation Report Cover

Table of Contents

Figure 13: Report Format

The next step was to put the identified weaknesses and challenges into a report. Since this report format would be the template used for many years, DDESB Staff went though many revisions until finally arriving at a final format (see figure 13). The final format lists the strengths and issues in table-format with the recommended corrective actions. The Staff details each issue in a separate appendix. This format provides an overview of each issue in the main section while providing the additional information in the back necessary for enumeration and clarification.

Conclusion and Future

The programmatic evaluation process produces a different type of result than past surveys as well as shifts the responsibility for compliance inspections from the DDESB Staff to the DoD Component itself. In the past, the surveys stressed strict compliance with the Standard. When non-compliance issues were found, the installation was required to develop and submit a corrective action plan through its chain-of-commend to DDESB. Now, DDESB looks at the how effective the various DoD Components are in implementing their ESMPs consistently across their commands. The DDESB Staff believes this changes DDESB's focus to identifying the systemic problems at the DoD component level rather than identifying the symptoms at the installation level, as in the past.

Based on the two plus years of experience with the new evaluation process, the DDESB Staff believes that the process will never be static, but rather will evolve constantly with each passing cycle. The Staff tries not to change the evaluation process during the evaluation year in fairness to the DoD Component being evaluated.

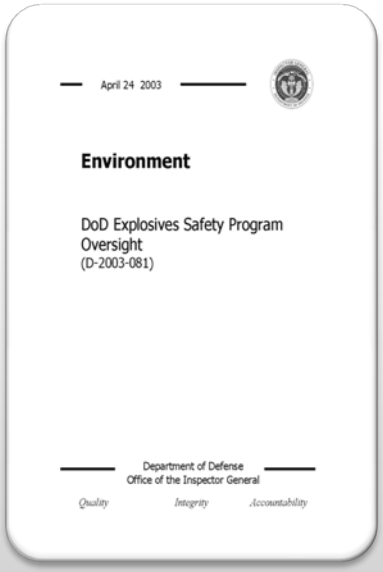
DDESB Explosives Safety Management Program Evaluation Process

Eric Alchowiak
Director, Program Evaluation Division

34th DDESB Explosives Safety Seminar
Portland Marriott Downtown Waterfront
Portland, Oregon
13-15 July 2010

Program Transition

2003 DoDIG Review of Explosives Safety Oversight


April 24 2003

Environment

DoD Explosives Safety Program Oversight
(D-2003-081)

Department of Defense
Office of the Inspector General

Quality *Integrity* *Accountability*

- Stakeholder input
- Recommended changes to ESMP
  - Mission Focus
- DDESB Strategic Plan
  - Programmatic reviews vs. surveys

Surveys vs. Evaluations

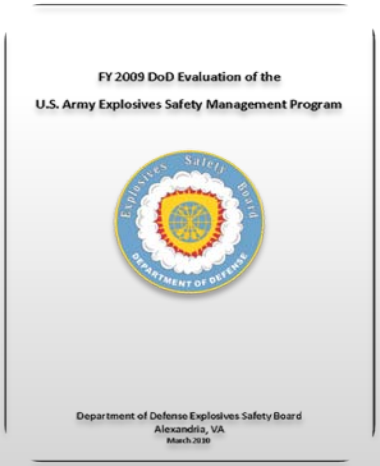
Surveys:

- Installation Focus
- Compliance Driven

Evaluations:

- Service Focus
- ESMP Effectiveness

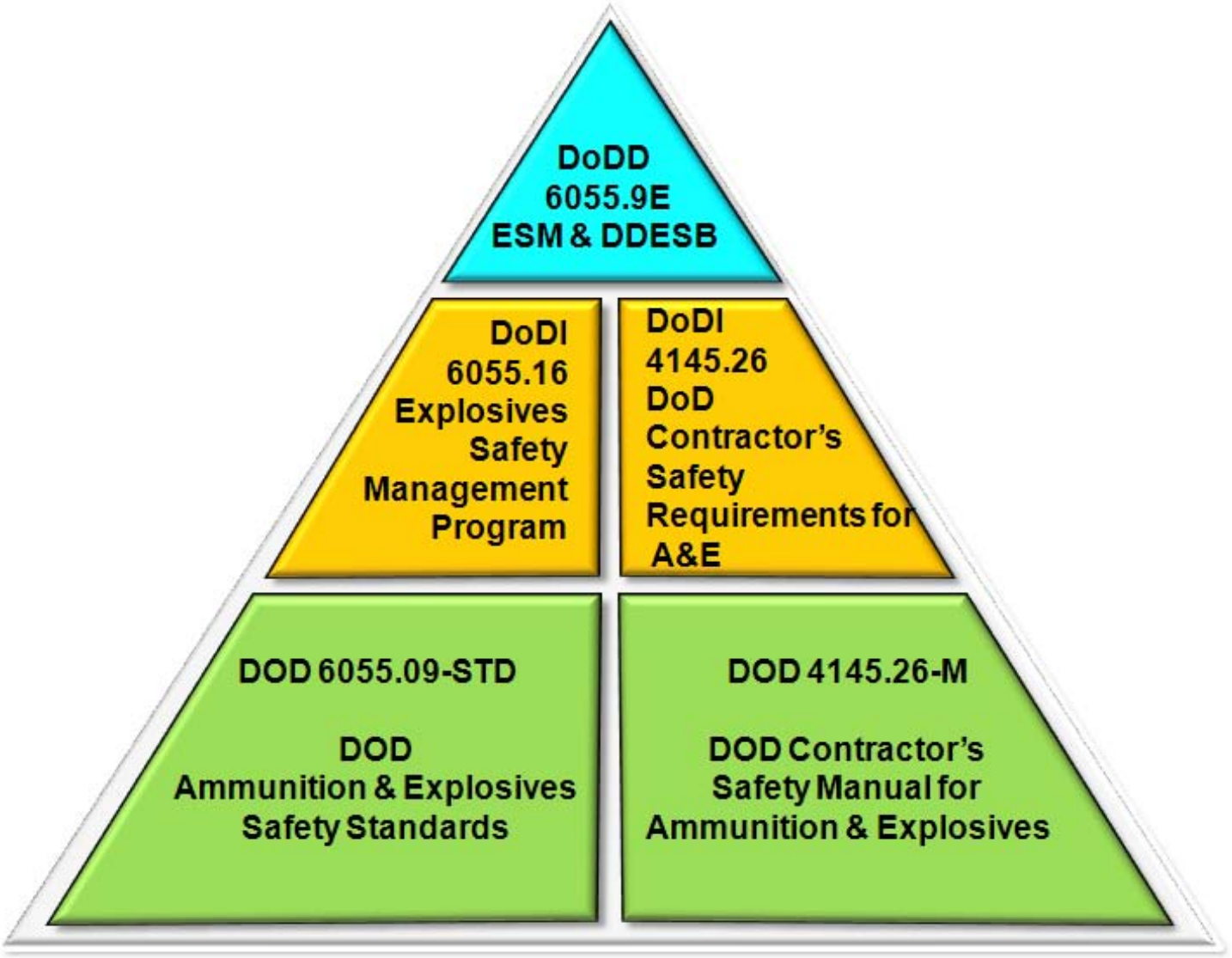
Evaluation Objectives


FY 2009 DoD Evaluation of the
U.S. Army Explosives Safety Management Program

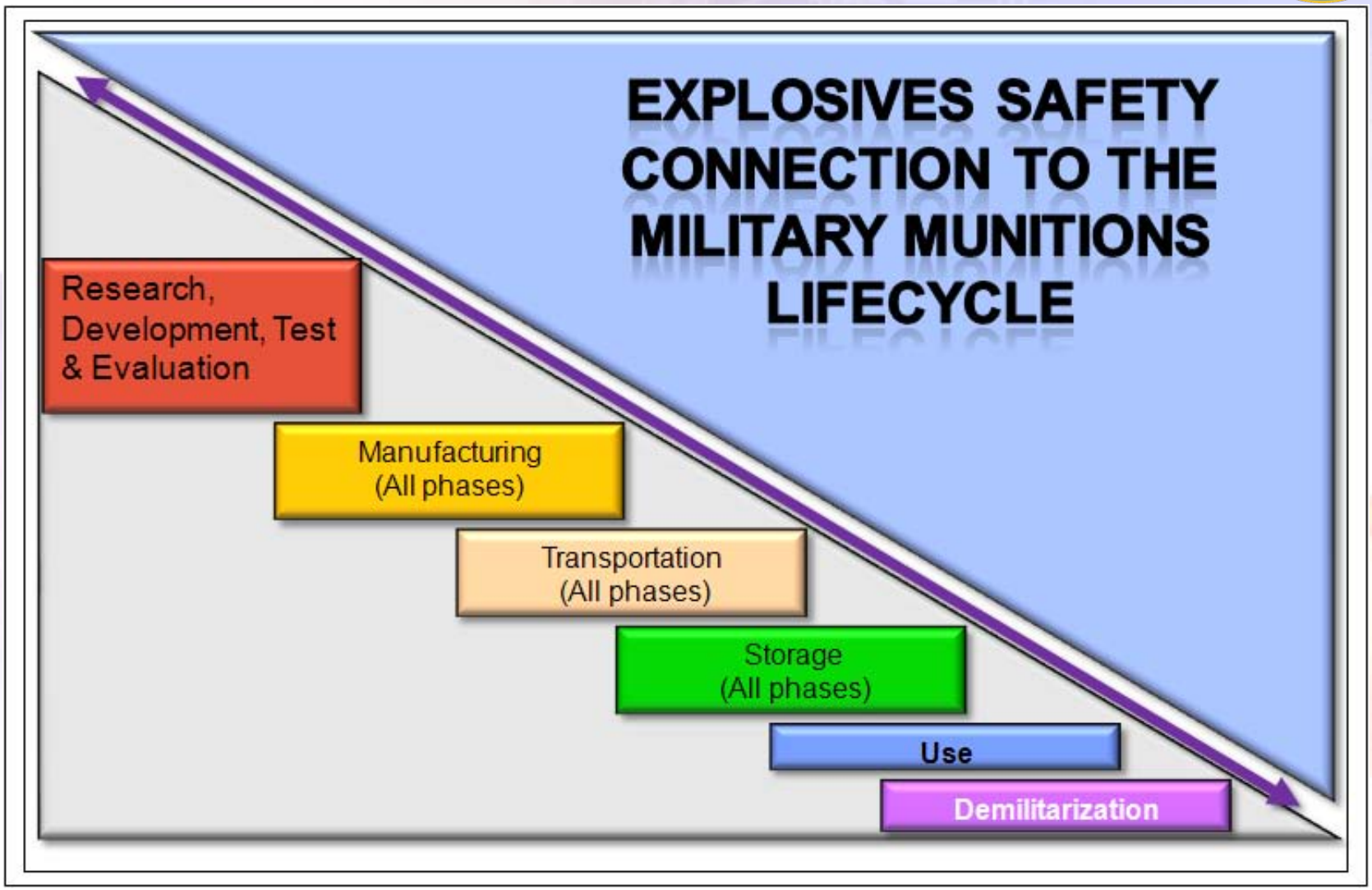
Department of Defense Explosives Safety Board
Alexandria, VA
March 2010

- Assess effectiveness of Service ESMP program
- Validate new requirements
- Recommend revisions to existing requirements
- Identify trends
- Recommend solutions to emerging problem areas

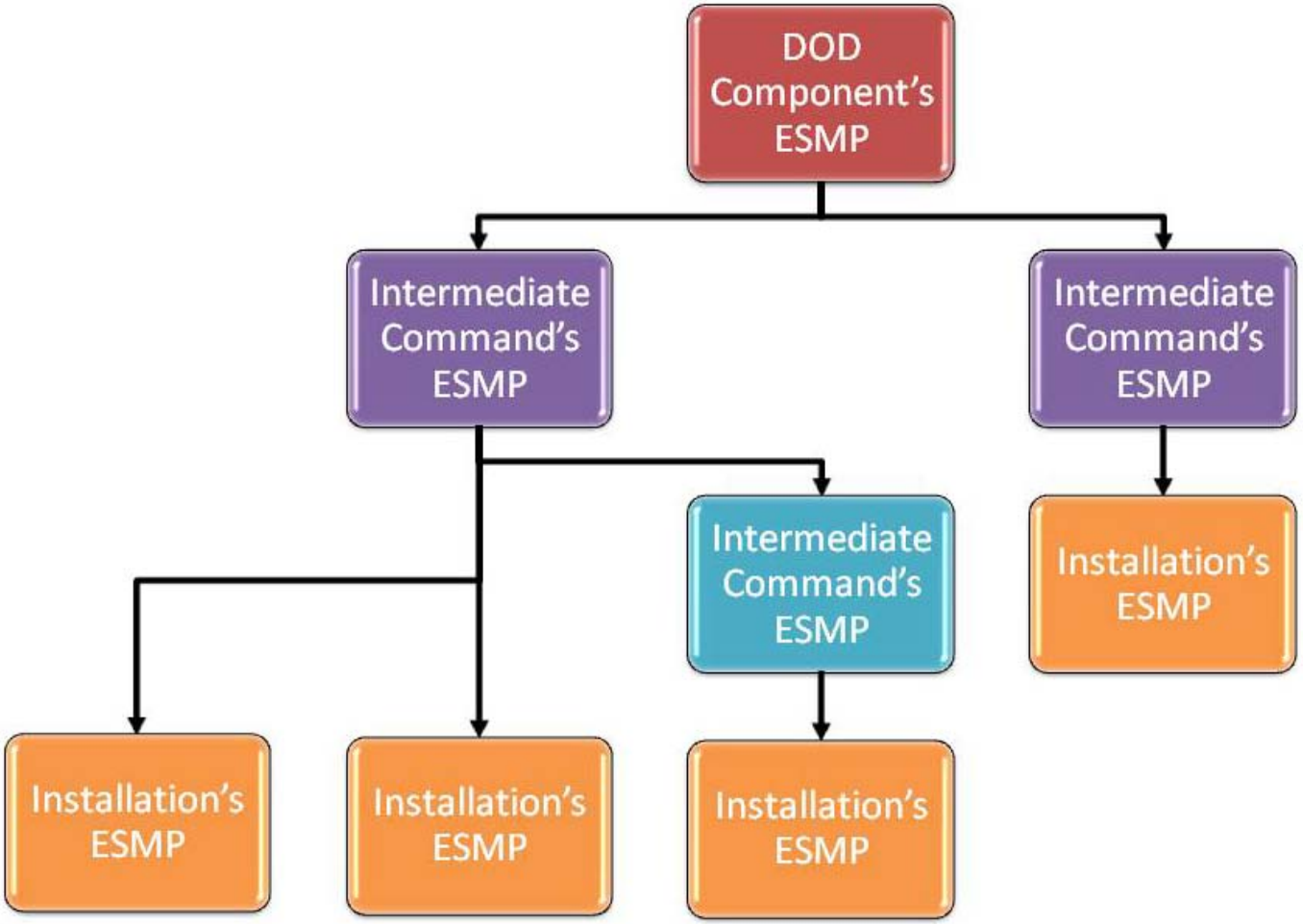
Requirements Hierarchy



Life Cycle Focus

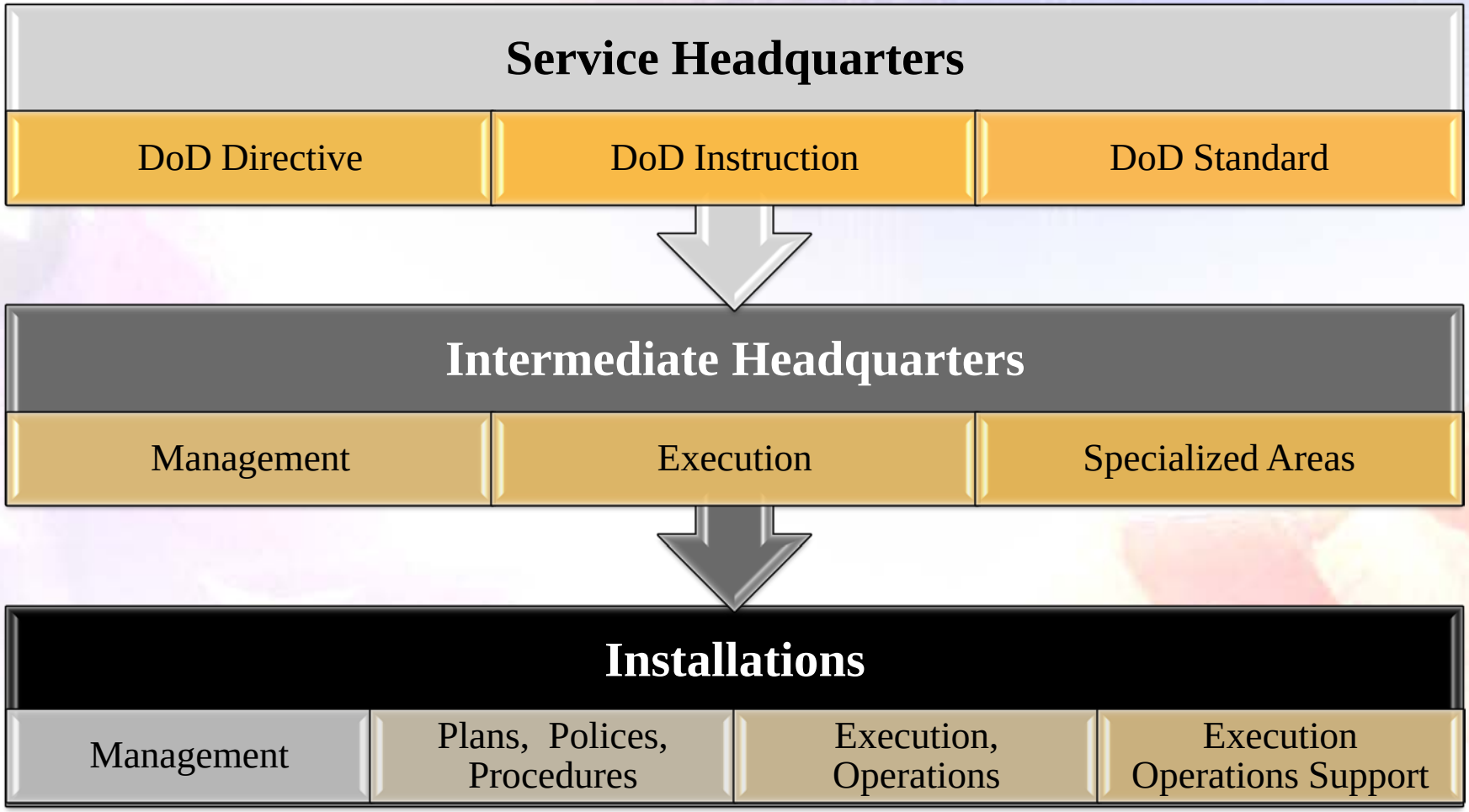


Multi-Tiered Approach

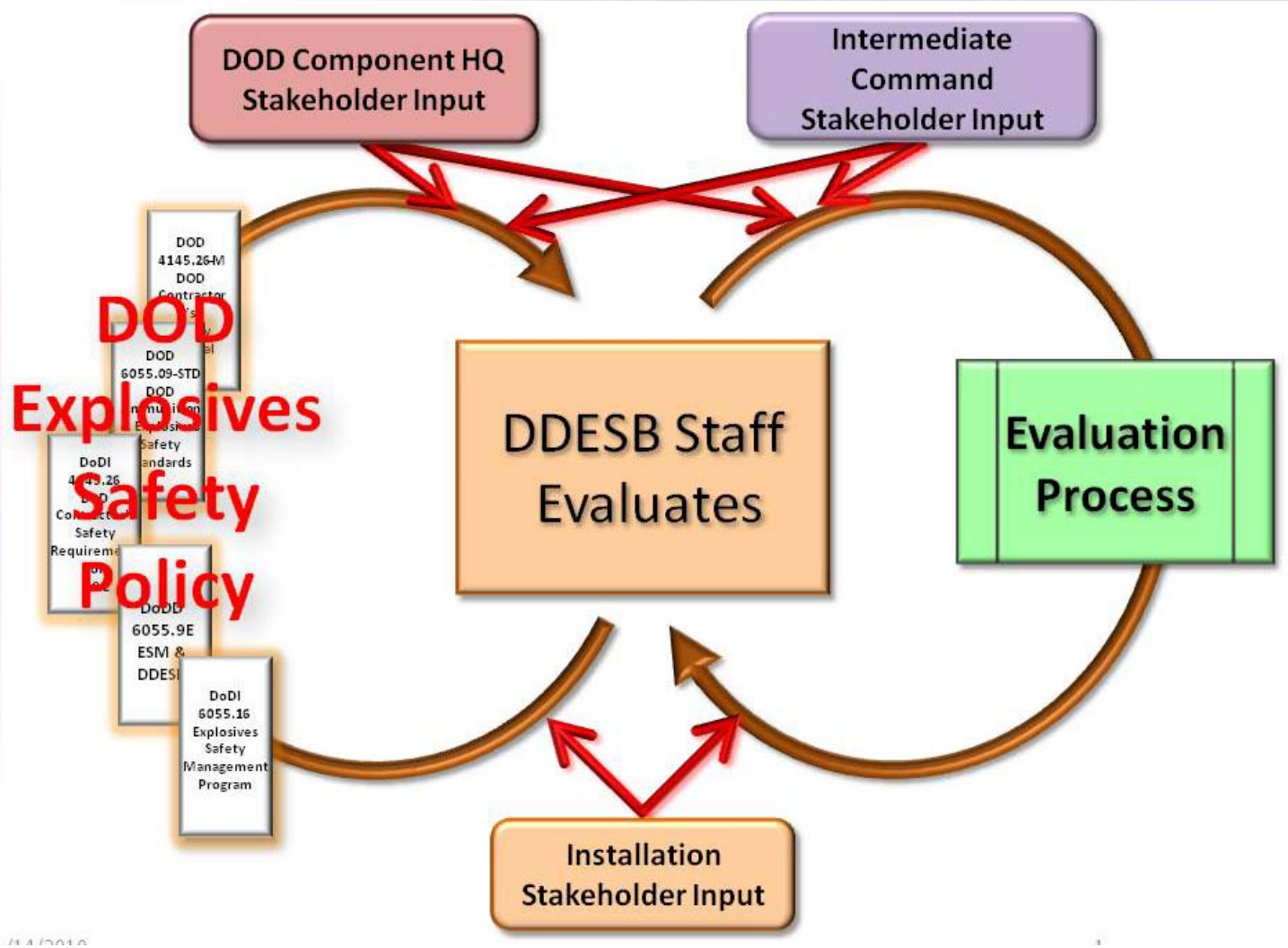


Evaluation Review Levels

Three Tier Review Process



Collaborative Process



Service Headquarters

Service Headquarters Program Evaluation Areas		
DoD Directive 6055.9	DoD Instruction 6055.16	DoD Standard 6055.09
1.1 General Tenets	2.1 Decision Making Elements	3.1 Management
1.2 Program Management	2.2 Implementation, Resourcing and RDT&E	3.2 Plans, Policies, Procedures
1.3 Munitions Response	2.3 Board Level Items	3.3 Execution, Operations
1.4 R&D Investments	2.4 Other Responsibilities	3.4 Execution and Operations Support
1.5 Risk Stewardship		

Intermediate Headquarters

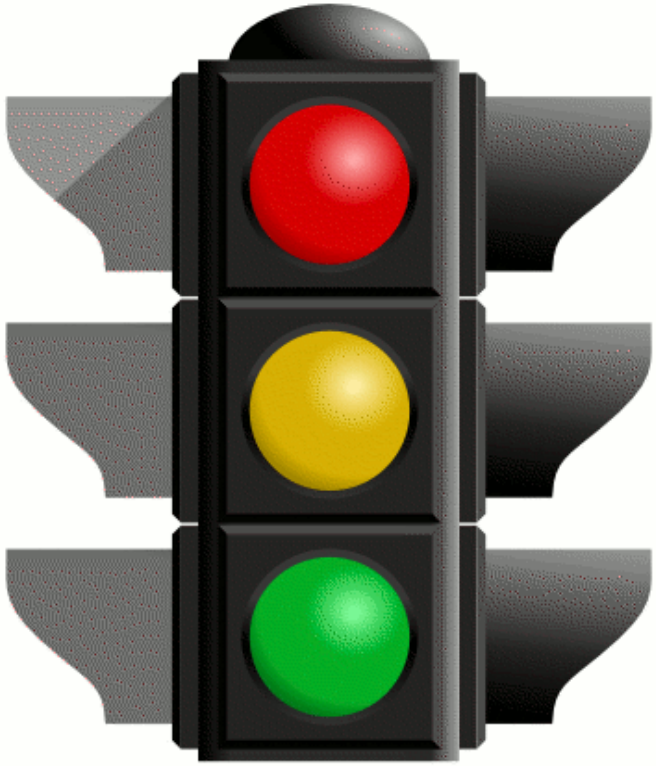
Intermediate HQ Program Evaluation Areas		
Management	Execution	Specialized Areas
1.1 Organization and Staffing	2.1 Inspections, Evaluations, Audits, or Surveillance	3.1 Host Nation, Shared Base, and Multi-National
1.2 Resource Allocation	2.2 Mishap Prevention	3.2 Joint Basing and Tenants
1.3 Issuances	2.3 Training	3.3 Munitions Response
1.4 Risk Stewardship	2.4 Site Planning	3.4 Hazard Classification
1.5 Planning		3.5 Contracts

Installation Level

Installation Level Program Evaluation Areas

Management	Plans, Policies, Procedures	Execution, Operations	Execution, Operations Support
1.1 Organization & Staffing	2.1 Site Planning	3.1 Facilities Conformance	4.1 Emergency Response
1.2 Tenants	2.2 Master Planning	3.2 Ranges	4.2 Inspections, Evaluations, Audits, Surveillance
1.3 Contractors	2.3 Accident Prevention Program	3.3 Demilitarization and Destruction	4.3 Facility Maintenance
1.4 Risk Stewardship	2.4 Explosives Safety Issuances	3.4 Records Management	4.4 Training

Outbrief Format



Management	Plans, Policies, Procedures	Execution, Operations	Execution, Operations Support

RED: Indicates one of two possible conditions:

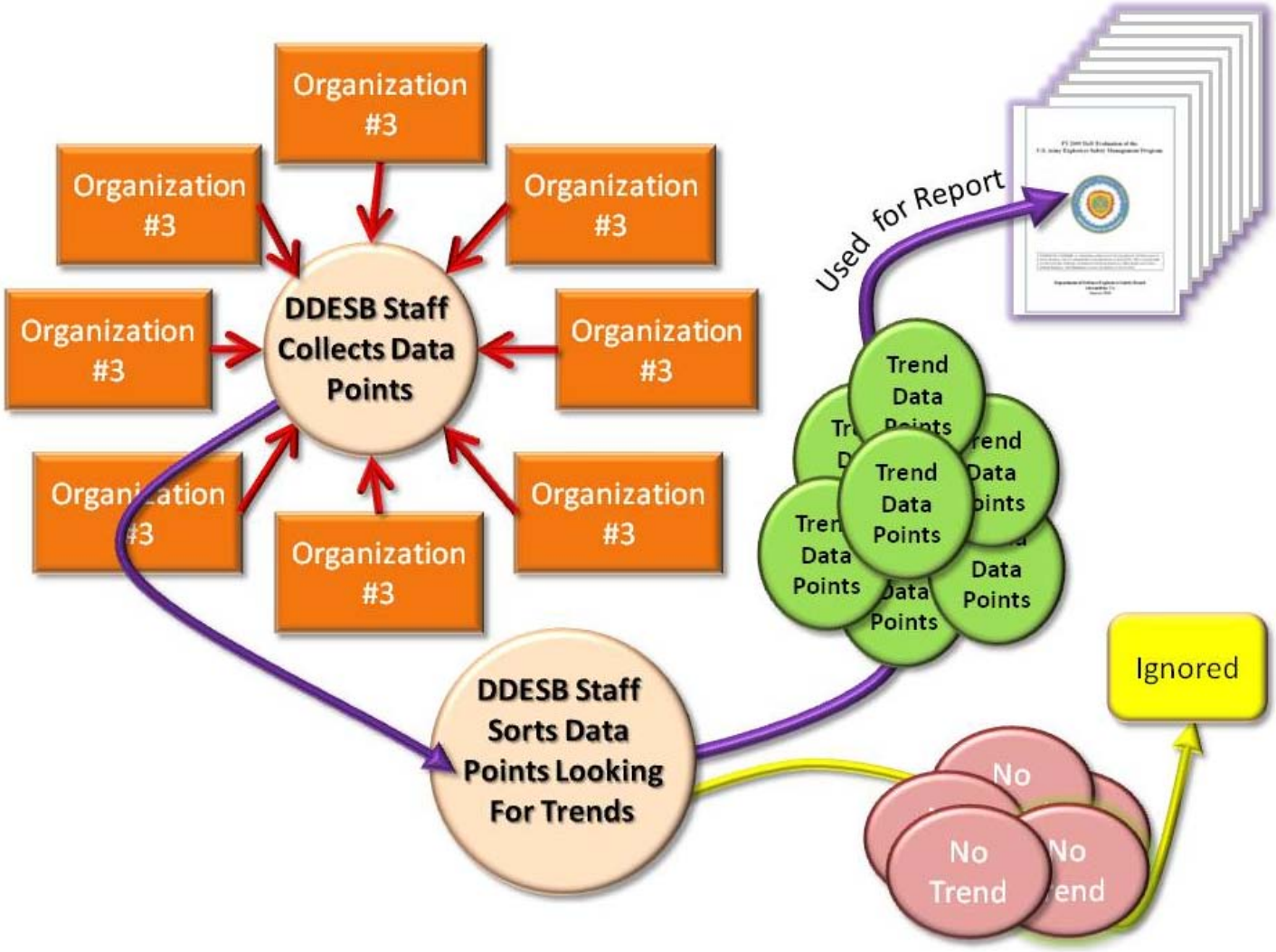
A systemic program weaknesses, such as lack of a process, or;

A recognized *Imminently Dangerous condition* to workers or the public.

Yellow: Indicates local problems or process weaknesses exist.

Green: **O**rganization has implemented the program element and associated processes. Minor issues may exist.

Data Evaluation



Service – DoD Report

Collection of data points

Identification of possible issues

Development of full description

Final Report

Service Recommendations

DoD Actions

Schedule

FY 2010

Air Force

FY 2011

Navy

FY 2012

Marines

1st

6-Months

FY 2012

Army

2nd

6-Months

+

FY 2013

Army

Questions

Backup

Area 1 - Management					
Elements	**Evaluation Goals**	**Evaluation Sub-Elements**			
1.1 Organization and Staffing	Is the explosives safety organizational structure and staffing adequate to support the organization's mission	Clear, documented organizational responsibilities. Mission statement includes explosives and explosive safety responsibility.	Organizational line to Commander	Assigned Explosives Safety Office/Officer or functional equivalent	Explosives safety organizational staffing adequate to support mission. Permanent assignment or collateral duty. Formal training or OJT.
1.2 Tenants	Are tenants monitored, controlled and managed to ensure their explosives safety posture meets, or is compatible with, the Service and mission requirements of the organization	Tenants identified. Tenant mission identified. Tenant personnel identified and controlled.	Tenant functions monitored: explosives operations approved or permitted, site access, inspection or review of tenant explosives activities	Tenant command reporting structure. Report thru host or autonomous. Explosives safety review.	Tenant MOU, MOA or other agreements in place for management of explosives hazards
1.3 Contractors	Are contractors monitored, controlled and managed to ensure their explosives safety posture meets, or is compatible with, the Service and mission requirements of the organization	Contractors identified and controlled.	Contracts written to contain provisions requiring compliance with DoD explosives Safety Standards	Contractors work to explosives safety levels no less stringent than DoD requirements	Contractors report accidents and near-misses IAW DoD Standard or contractor safety manual as appropriate.
1.4 Risk Stewardship	A risk management process ensures the responsible use of resources in identifying, evaluating, managing (i.e., preventing, controlling, mitigating) the potential explosives and chemical agent safety risks.	Waivers, exemptions or certifications in place to address violations to DoD standards.	Are hazards tracked, monitored evaluated, and management controls adjusted as necessary.	Is hazard control information transmitted to personnel (i.e., personnel are aware of explosives hazards, signage, farmers, grass cutters, hunters, fishing, etc.)	Are risk decisions made and accepted at levels comparable to the hazard.